

**NATURAL RESOURCES CONSERVATION SERVICE
NEW JERSEY
CONSERVATION PRACTICE STANDARD**

**PEST MANAGEMENT
(Acre)**

CODE 595 A, B

DEFINITION

Utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies, to manage weeds, insects, diseases, animals and other organisms (including invasive and non-invasive species), that directly or indirectly cause damage or annoyance.

PURPOSES

This practice is applied as part of a Resource Management System (RMS) to support one or more of the following purposes:

- Enhance quantity and quality of commodities.
- Minimize negative impacts of pest control on soil resources, water resources, air resources, plant resources, animal resources and/or humans.

CONDITIONS WHERE PRACTICE APPLIES

Wherever pests will be managed.

This 595 Standard has two tiers. It incorporates Pest Management, Basic (595B) and Pest Management, Advanced (595A). Criteria and Operation & Maintenance are established at two different management levels. The 595 A advanced tier uses increased monitoring of crops, pests, fertility and other management practices including weather and uses advanced biological and other non-chemical tactics compared to basic 595 B.

CRITERIA

Standard 595 B: Pest Management, Basic

General Criteria Applicable to All Purposes

A pest management component of a conservation plan shall be developed.

All methods of pest management must comply with Federal, State, and local regulations, including management plans for invasive pest species, noxious weeds and disease vectors. Compliance with the Food Quality Protection Act (FQPA); Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); Worker Protection Standard (WPS); and Interim Endangered Species Protection Program (H7506C) is required for chemical pest control.

Integrated Pest Management (IPM) that strives to balance economics, efficacy and environmental risk, where available, shall be incorporated into planning alternatives.

IPM is a sustainable approach to pest control that combines the use of prevention, avoidance, monitoring and suppression strategies, to maintain pest populations below economically damaging levels, to minimize pest resistance, and to minimize harmful effects of pest control on human health and environmental resources. IPM suppression systems include biological controls, cultural controls and the judicious use of chemical controls.

The Rutgers Cooperative Extension commodity specific IPM program details can be found at : <http://www.pestmanagement.rutgers.edu/IPM/index.html>

An appropriate set of mitigation techniques must be planned and implemented to reduce the environmental risks of pest management activities in accordance with quality criteria in the NJ Field Office Technical Guide. Mitigation techniques can include

practices like Filter Strip, Field Border, Riparian Forest Buffer or Conservation Crop Rotation, and management techniques like application method or timing. See Table 1 for guidance on mitigation measures.

All methods of pest management must be integrated with other components of the conservation plan.

Clients shall be instructed to pay special attention to all environmental hazards and site-specific application criteria listed on pesticide labels and contained in Extension and Crop Consultant recommendations.

Additional Criteria to Protect Quantity and Quality of Commodities

As an essential component of both commodity-specific IPM and IPM general principles, clients shall be encouraged to use the minimum level of pest control necessary to meet their objectives for commodity quantity and quality.

Additional Criteria to Protect Soil Resources

In conjunction with other conservation practices, the number, sequence and timing of tillage operations shall be managed to maintain soil quality and maintain soil loss at or below the soil loss tolerance (T) or any other planned soil loss objective.

Clients shall be encouraged to pay special attention to pesticide label instructions for limiting pesticide residues in soil that may negatively impact non-target plants, animals and humans.

Additional Criteria to Protect Water Resources

Pest management environmental risks, including the impacts of pesticides in ground and surface water on humans and non-target plants and animals, must be evaluated for all identified water resource concerns. The NRCS' Windows Pesticide Screening Tool (WIN-PST) and National Agricultural Pesticide Risk Analysis (NAPRA) shall be used for this risk evaluation function. WIN-PST is used for most evaluations; NAPRA shall be used by specialists when greater detail is desired to refine a WIN-PST scenario. WIN-PST can be found at: <http://www.wcc.nrcs.usda.gov/pestmgt/winpst.html>

When a chosen alternative has significant potential to negatively impact important water resources, (e.g., WIN-PST "Extra High", "High" or "Intermediate" soil/pesticide human risk ratings in the drainage area of a drinking water reservoir), an appropriate set of mitigation techniques must be put in place to

address risks to humans and non-target plants and animals. **Table 1 provides guidance in choosing appropriate mitigation measures.**

Clients shall be encouraged to pay special attention to pesticide label instructions for limiting pesticide residues in leachate and runoff that may negatively impact non-target plants, animals and humans.

The number, sequence and timing of tillage operations shall be managed in conjunction with other sediment control tactics and practices, in order to minimize sediment losses to nearby surface water bodies.

Additional Criteria to Protect Air Resources

Clients shall be encouraged to pay special attention to pesticide label instructions for minimizing volatilization and drift that may negatively impact non-target plants, animals and humans.

Additional Criteria to Protect Plant Resources

Clients shall be encouraged to pay special attention to pesticide label instructions including those directed at:

- Preventing misdirected pest management control measures that negatively impact plants (e.g., removing pesticide residues from sprayers before moving to the next crop and properly adjusting cultivator teeth and flame burners).
- Appropriate climatic conditions, crop stage, soil moisture, pH, and organic matter in order to protect plant health.
- Limiting pesticide residues in soil that can carry over and harm subsequent crops.

Additional Criteria to Protect Animal Resources

Clients shall be encouraged to pay special attention to pesticide label instructions that minimize negative impacts to animals.

Additional Criteria to Protect Humans

Clients shall be encouraged to pay special attention to pesticide label instructions that minimize negative impacts to humans.

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Standard 595 A: Pest Management, Advanced

All criteria cited for Standard 595 B shall apply. In addition, Advanced Pest Management clients will have a specific and statistically based monitoring program for pest identification including traps, lures and similar devices. Mating disruption will be used where appropriate: natural enemies will be conserved, more selective vs broad spectrum pesticides will be used: and a list of prohibited pesticides will reduce environmental risks with advanced Pest Management. This list is located in **Appendix 1**.

CONSIDERATIONS

Both Standards 595 A and B

If commodity-specific IPM is not available, the following IPM principles should be considered:

- Prevention, such as using pest-free seeds and transplants, cleaning tillage and harvesting equipment between fields, irrigation scheduling to avoid situations conducive to disease development, etc.
- Avoidance, such as using pest resistant varieties, crop rotation, trap crops, etc.
- Monitoring, such as pest scouting, soil testing, weather forecasting, etc. to help target suppression strategies and avoid routine preventative pest control.
- Suppression, such as cultural, biological and chemical controls, that can reduce a pest population or its impacts. Chemical controls should be used judiciously in order to minimize environmental risk and pest resistance.

Adequate plant nutrients and soil moisture, including favorable pH and soil conditions, should be available to reduce plant stress, improve plant vigor and increase the plant's overall ability to tolerate pests.

On irrigated land, irrigation water management should be designed to minimize pest management environmental risk.

PLANS AND SPECIFICATIONS

Both Standards 595 A and B

The pest management component of a conservation plan shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended purpose(s).

As a minimum, the pest management component of a conservation plan shall include:

- Plan map and soil map of managed site, if applicable .
- Location of sensitive resources and setbacks, if applicable.
- Environmental risk analysis, with approved tools and/or procedures, for probable pest management recommendations by crop (if applicable) and pest.
- Interpretation of the environmental risk analysis and identification of appropriate mitigation techniques.
- Operation and maintenance requirements.

OPERATION AND MAINTENANCE

Standard 595 B: Pest Management, Basic

The pest management component of a conservation plan shall include appropriate operation and maintenance items for the client. These may include:

- Review and update the plan periodically in order to incorporate new IPM technology, respond to cropping system and pest complex changes, and avoid the development of pest resistance.
- Maintain mitigation techniques identified in the plan in order to ensure continued effectiveness.
- Develop a safety plan for individuals exposed to chemicals, including telephone numbers and addresses of emergency treatment centers for individuals exposed to chemicals and the telephone number for the nearest poison control center.
- **The number for the New Jersey Poison Information and Education System is**

1-800-222-1222

The National Pesticide Telecommunications Network (NPTN) is now the National Pesticide Information Center (www.npic.orst.edu). The telephone number for the National Pesticide Information Center (NPIC) is

1-800-858-7384

For advice and assistance with emergency spills that involve agrichemicals, the local emergency telephone number should be provided. The national 24-hour CHEMTREC (www.chemtrec.org) telephone number may also be given:

1-800-424-9300

- Follow all label requirements for mixing/loading setbacks from wells, intermittent streams and rivers, natural or impounded ponds and lakes, or reservoirs. (State or local regulations may be more restrictive and take precedence).
- Post signs according to label directions and/or Federal, State, and local laws around sites that have been treated. Follow restricted entry intervals.
- Dispose of pesticides and pesticide containers in accordance with label directions and adhere to Federal, State, and local regulations.
- Read and follow label directions and maintain appropriate Material Safety Data Sheets (MSDS). Sheets are available at: <http://msds.pdc.cornell.edu/msdssrch.asp>
- Calibrate application equipment according to Extension and/or manufacturer recommendations before each seasonal use and with each major chemical change.
- Replace worn nozzle tips, cracked hoses, and faulty gauges.
- Maintain records of pest management for at least two years. Pesticide application records shall be in accordance with New Jersey Pesticide Control Program requirements. An example follows Table 1.

REFERENCES

Commercial Vegetable Production Recommendations. Rutgers Cooperative Extension. New Brunswick, NJ 2001.

Conservation Buffers to Reduce Pesticide Loss. USDA-NRCS. Fort Worth, Texas. 2000.

National Agricultural Pesticide Risk Analysis (NAPRA). USDA-NRCS. Amherst, MA. 1995.

Pest Control Recommendations for Shade Trees and Commercial Nursery Crops. Rutgers Cooperative Extension. New Brunswick, NJ. 2001

Pest Management Recommendations for Field Crops. Bulletin 237 Rutgers Cooperative Extension. New Brunswick, NJ. 2001.

WIN-PST: A Windows Based Pesticide Screening Tool. USDA-NRCS. Amherst, MA. 2000.

- *Note: NJ forms for pesticide recordkeeping can be downloaded directly from:*
<http://www.pestmanagement.rutgers.edu/PAT/RecordForms/PrivateApplicatorRecord.PDF>

Standard 595 A: Pest Management, Advanced

All Operations and Maintenance items from 595 B shall be met. In addition,

- Maintain records of pest and cultural management practices for at least **three** years. Pesticide application records shall be in accordance with New Jersey Pesticide Control Program requirements. An example follows Table 1.
- Calibrate application equipment according to Extension and/or manufacturer recommendations before each seasonal use and with each major chemical or **practice** change.

Appendix 1: Prohibited Pesticides for 595 A, Pest Management, Advanced

Tree Fruit and Blueberries

Insecticides:

AI_NAME

Acephate (ANSI) (non-greenhouse use)
 Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Demeton
 Dichlorvos
 Dicrotophos
 Dimethoate (ANSI)
 Disulfoton
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos (ANSI)
 Isofenphos
 Merphos
 Methamidophos (ANSI)
 Methidathion (ANSI)
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate (ANSI)
 Pirimiphos-ethyl (ANSI)
 Profenofos (ANSI)
 Temephos (ANSI)
 Terbufos (ANSI)
 Toxaphene
 Tribuphos
 Trichlorfon

COMMONNAME

Acephate (ANSI)
 Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Demeton
 Dichlorvos (DDVP)
 Dicrotophos
 Dimethoate (ANSI)
 Disulfoton
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos
 Isofenphos
 Merphos
 Methamidophos
 Methidathion
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate
 Pirimiphos-Ethyl (ANSI)
 Profenofos
 Temephos (ANSI)
 Terbufos
 Toxaphene
 Tribuphos
 Trichlorfon

Fungicides:

AI_NAME

Metiram

COMMONNAME

Metiram

Herbicides:

AI_NAME

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine

COMMONNAME

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine

Field Crops

Insecticides:

AI_NAME

Acephate (ANSI) (non-greenhouse use)
 Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Demeton
 Diazinon (ANSI)
 Dichlorvos
 Dicrotophos
 Dimethoate (ANSI)
 Disulfoton
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos (ANSI)
 Isofenphos
 Merphos
 Methamidophos (ANSI)
 Methidathion (ANSI)
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate (ANSI)
 Phosmet
 Pirimiphos-ethyl (ANSI)
 Profenofos (ANSI)
 Toxaphene
 Tribuphos
 Trichlorfon

COMMONNAME

Acephate (ANSI)
 Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Demeton
 Diazinon (ANSI)
 Dichlorvos (DDVP)
 Dicrotophos
 Dimethoate (ANSI)
 Disulfoton
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos
 Isofenphos
 Merphos
 Methamidophos
 Methidathion
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate
 Phosmet
 Pirimiphos-Ethyl (ANSI)
 Profenofos
 Toxaphene
 Tribuphos
 Trichlorfon

Fungicides:

AI_NAME

Mancozeb
 Maneb
 Metiram
 Ziram

COMMONNAME

Mancozeb
 Maneb
 Metiram
 Ziram

Herbicides:

AI_NAME

Alachlor (ANSI)
 Atrazine (ANSI)

COMMONNAME

Alachlor (ANSI)
 Atrazine (ANSI)

Vegetables**Insecticides:****AI_NAME**

Acephate (ANSI)
 Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Demeton
 Dichlorvos
 Dicrotophos
 Dimethoate (ANSI)
 Disulfoton
 Fenamiphos
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos (ANSI)
 Isofenphos
 Merphos
 Methamidophos (ANSI)
 Methidathion (ANSI)
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phosmet
 Pirimiphos-ethyl (ANSI)
 Profenofos (ANSI)
 Rotonone
 Temephos (ANSI)
 Terbufos (ANSI)
 Toxaphene
 Tribuphos
 Trichlorfon

COMMONNAME

Acephate (ANSI)
 Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Demeton
 Dichlorvos (DDVP)
 Dicrotophos
 Dimethoate (ANSI)
 Disulfoton
 Fenamiphos
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos
 Isofenphos
 Merphos
 Methamidophos
 Methidathion
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phosmet
 Pirimiphos-Ethyl (ANSI)
 Profenofos
 Rotonone
 Temephos (ANSI)
 Terbufos
 Toxaphene
 Tribuphos
 Trichlorfon

Fungicides:**AI_NAME**

Metiram
 Ziram

COMMONNAME

Metiram
 Ziram

Herbicides:**AI_NAME**

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine
 Paraquat dichloride
 Simazine (ANSI)

COMMONNAME

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine
 Paraquat dichloride
 Simazine (ANSI)

Greenhouses

Insecticides:

AI_NAME

Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Coumaphos
 Demeton
 Dichlorvos
 Dicrotophos
 Disulfoton
 Fenamiphos
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos (ANSI)
 Isofenphos
 Merphos
 Methamidophos (ANSI)
 Methidathion (ANSI)
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate (ANSI)
 Pirimiphos-ethyl (ANSI)
 Profenofos (ANSI)
 Temephos (ANSI)
 Terbufos (ANSI)
 Toxaphene
 Tribuphos
 Trichlorfon

COMMONNAME

Aldoxycarb (ANSI)
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Coumaphos
 Demeton
 Dichlorvos (DDVP)
 Dicrotophos
 Disulfoton
 Fenamiphos
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos
 Isofenphos
 Merphos
 Methamidophos
 Methidathion
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate
 Pirimiphos-Ethyl (ANSI)
 Profenofos
 Temephos (ANSI)
 Terbufos
 Toxaphene
 Tribuphos
 Trichlorfon

Fungicides:

AI_NAME

Mancozeb
 Maneb
 Metiram
 Ziram

COMMONNAME

Mancozeb
 Maneb
 Metiram
 Ziram

Herbicides:

AI_NAME

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine
 Paraquat dichloride
 Simazine (ANSI)

COMMONNAME

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine
 Paraquat dichloride
 Simazine (ANSI)

Nursery**Insecticides:****AI_NAME**

Aldoxycarb (ANSI)
 Alpha-cypermethrin
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Coumaphos
 Demeton
 Dichlorvos
 Dicrotophos
 Disulfoton
 Fenamiphos
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos (ANSI)
 Isofenphos
 Merphos
 Methamidophos (ANSI)
 Methidathion (ANSI)
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate (ANSI)
 Phosmet
 Pirimiphos-ethyl (ANSI)
 Profenofos (ANSI)
 Temephos (ANSI)
 Terbufos (ANSI)
 Toxaphene
 Tribuphos
 Trichlorfon

COMMONNAME

Aldoxycarb (ANSI)
 Alpha-cypermethrin
 azinphos methyl
 Carbophenothion (ANSI)
 Chlordane
 Coumaphos
 Demeton
 Dichlorvos (DDVP)
 Dicrotophos
 Disulfoton
 Fenamiphos
 Fenitrothion
 Fensulfothion
 Fenthion
 Isazofos
 Isofenphos
 Merphos
 Methamidophos
 Methidathion
 Methyl parathion
 Mevinphos
 Monocrotophos
 Oxydemeton-methyl
 Phorate
 Phosmet
 Pirimiphos-Ethyl (ANSI)
 Profenofos
 Temephos (ANSI)
 Terbufos
 Toxaphene
 Tribuphos
 Trichlorfon

Fungicides:**AI_NAME**

Metiram

COMMONNAME

Metiram

Herbicides:**AI_NAME**

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine
 Paraquat dichloride

COMMONNAME

Alachlor (ANSI)
 Atrazine (ANSI)
 Cyanazine
 Paraquat dichloride

TABLE 1**Mitigation Effectiveness Guide - Reducing Pesticide Impacts on Water Quality**

Note: This table identifies pest management mitigation techniques, rates their relative effectiveness by pesticide loss pathway, and identifies how the techniques function. Mitigation techniques with three pluses (+) are generally more effective than techniques with two pluses, and techniques with two pluses are generally more effective than techniques with one plus. Techniques without a plus or minus (-) generally have no appreciable effect. Techniques with a minus generally have a negative effect. Effectiveness of any mitigation technique can be highly variable based on site conditions. Therefore, with guidance provided by the table, site-specific selection of appropriate mitigation techniques for identified resource concerns is left to the professional judgement of the conservation planner.

Pest Management Mitigation Techniques	Pesticide Loss Pathways			Comments
	Leaching	Solution Runoff	Adsorbed Runoff	
Management Techniques^{1/}				
Application Timing	+++	+++	+++	Reduces exposure potential - application must be delayed when significant rainfall events are forecast, application when conditions are optimal reduces pesticide application
Formulations/Adjuvants	++	++	+	Reduces exposure potential - formulations and/or adjuvants that increase efficacy allow lower application rates
Lower Application Rates	+++	+++	+++	Reduces exposure potential - use lowest effective rate
Partial Substitution	+++	+++	+++	Reduces hazard potential - use alternative pesticides with lower environmental risk
Partial Treatment	+++	+++	+++	Reduces exposure potential - spot treatment, banding and directed spraying reduce amount of pesticide applied
Pesticide Label Environmental Hazard Warnings and BMPs	Required ^{2/}	Required ^{2/}	Required ^{2/}	Reduces exposure potential - label guidance must be carefully followed for pesticide applications near water bodies and on soils that are intrinsically vulnerable to erosion, runoff, or leaching
Scouting and Integrated Pest Management (IPM) Thresholds	+++	+++	+++	Reduces exposure potential - reduced pesticide application
Set-backs	+	+	+	Reduces exposure potential - reduced application area reduces amount of pesticide applied and the increased distance between the application area and surface water reduces drift and inadvertent direct application to surface water

Soil Incorporation – mechanical or irrigation	-	+++	+++	Reduces exposure potential for surface losses, but increases exposure potential for leaching losses
Pest Management Mitigation Techniques	Pesticide Loss Pathways			Comments
	Leaching	Solution Runoff	Adsorbed Runoff	
Conservation Practices ^{3/}				
Agrichemical Mixing Center (Interim)	+++	+++	+++	Reduces the potential for point source contamination
Brush Management (314)	+++	+++	+++	Using non-chemical brush control reduces the need for pesticides
Deep Tillage (324)	-	+	+	Increases infiltration
Conservation Cover (327)	+++	+++	+++	Retiring land from annual crop production often reduces the need for pesticides and builds organic matter
Constructed Wetland (656)	+	+	++	Captures and degrades pesticide residues
Conservation Crop Rotation (328)	++	++	++	Reduces the need for pesticides by breaking pest lifecycles
Contour Buffer Strips (332)		++	++	Increases infiltration, reduces erosion
Contour Farming (330)	-	++	++	Increases infiltration
Cover Crop (340)	++	++	++	Increases infiltration, reduces soil erosion and builds organic matter
Field Border (386)		+	++	Increases infiltration and traps adsorbed pesticides, often reduces application area resulting in less pesticide applied, increases distance between the application area and surface water to reduce drift and inadvertent direct application to surface water, can provide habitat for beneficial insects which reduces the need for pesticides, can provide habitat to congregate pests which can result in reduced pesticide application
Filter Strip (393)		++	+++	Increases infiltration and traps adsorbed pesticides, often reduces application area resulting in less pesticide applied, increases distance between the application area and surface water to reduce drift and inadvertent direct application to surface water, can provide habitat for beneficial insects which reduces the need for pesticides, can provide habitat to congregate pests which can result in reduced pesticide application
Grade Stabilization Structure (410)			+++	Traps adsorbed pesticides

Grassed Waterway (412)		+	++	Increases infiltration and traps adsorbed pesticides (should be applied with Filter Strips at the outlet and on each side of the waterway)
Irrigation Land Leveling (464)	+	+	+	Reduces exposure potential because uniform irrigation reduces pesticide transport to ground and surface water
Mitigation Technique	Pesticide Loss Pathways			Comments
	Leaching	Solution Runoff	Adsorbed Runoff	
Irrigation System Tail Water Recovery (447)	+	++	++	Captures pesticide residues
Irrigation Water Management (449)	+++	+++	+++	Reduces exposure potential because water is applied at rates that minimize pesticide transport to ground and surface water
Pasture and Hay Planting (512)	+++	+++	+++	Retiring land from annual crop production often reduces the need for pesticides, builds organic matter
Prescribed Burning (338)	+++	+++	+++	Reduces the need for pesticides
Prescribed Grazing (528A)	+++	+++	+++	Improves plant health and reduces the need for pesticides
Residue Management, No-till and Strip-Till (329A)	+	++	+++	Increases infiltration, reduces soil erosion and builds organic matter
Residue Management, Mulch-Till (329B)	+	++	+++	Increases infiltration, reduces soil erosion and builds organic matter
Residue Management, Ridge Till (329C)	+	++	+++	Increases infiltration, reduces soil erosion and builds organic matter
Residue Management, Seasonal (344)	+	+	+	Increases infiltration, reduces soil erosion and builds organic matter
Riparian Forest Buffer (391)	+	+++	+++	Increases infiltration, traps sediment and builds organic matter
Riparian Herbaceous Cover (390)	+	++	++	Increases infiltration, traps sediment and builds organic matter

Mitigation Technique	Pesticide Loss Pathways			Comments
	Leaching	Solution Runoff	Adsorbed Runoff	
Row Arrangement (557)	-	+	+	Increases infiltration, reduces soil erosion
Subsurface Drainage (606)	+	++	++	Increases surface infiltration and aerobic pesticide degradation in the rootzone *Note – avoid direct outlets to surface water
Terrace (600)	-	++	+++	Increases infiltration, reduces soil erosion
Tree and Shrub Establishment (612)	+++	+++	+++	Retiring land from annual crop production reduces the need for pesticides and builds organic matter
Waste Storage Facility (313)	+	++	++	Captures pesticide residues
Waste Treatment Lagoon (359)		+++	+++	Captures and degrades pesticide residues
Waste Utilization (633)	++	++	++	Increases organic matter
Water and Sediment Control Basin (638)	—	++	+++	Captures and degrades pesticide residues, increases infiltration
Well Decommissioning (351)	+++			Eliminates point source contamination
Wetland Creation (Ac.) (658)	+	+	+	Captures and degrades pesticide residues
Wetland Enhancement (Ac.) (659)	+	+	+	Captures and degrades pesticide residues
Wetland Restoration (Ac.) (657)	+	+	+	Captures and degrades pesticide residues

^{1/} Additional information on pest management mitigation techniques can be obtained from Extension pest management publications, pest management consultants and pesticide labels.

^{2/} The pesticide label is the law - all pesticide label specifications must be carefully followed, including required mitigation. Additional mitigation may be needed to meet NRCS pest management requirements for addressing identified natural resource concerns.

^{3/} Details regarding the effects of Conservation Practices on ground and surface water contamination by pesticides are contained in the Conservation Practice Physical Effects matrix found in the New Jersey Field Office Technical Guide Section V.

Private Applicator* Application, Active Ingredient, and Supervision Record

Date			Place of Application				Pesticide					Applicator &/or Those Supervised		
							*If multiple applications are made from a batch, enter both concentrate & diluent used to make <u>parent</u> batch for all applications from batch. Always write the amount of the mixture or pre-mixed product applied per application.							
Date of Application: (Hour if REI on label)	Restricted Entry Interval	Re-entry Time/Date	Name & address of farm	Specific field, greenhouse or land area municipality, county	Crop, commodity or stored product treated	Size of area treated	Brand or trade name	Active ingredient	EPA Registration Number	FOR MIXTURES		Amount Pre-mixed Product or Mixture/ Batch Applied	Full name(s)	For each name, indicate: 1) applicator #; 2) operator #; 3) Handler Card #; 4) 'OTJ' training or 5) other
										Amount Concentrate or Formulation	Amount Diluent			